

## CLAIMS

1. A button mechanism, comprising:  
a switch means for operating a button circuit in  
5 response to actuation of the button mechanism;  
display means disposed in correspondence with the  
switch means and comprising:  
a driver layer having a conductor pattern  
configured in the pattern of a symbol to be displayed on  
10 the button mechanism;  
a transparent conductor layer; and  
an electrically active ink layer disposed  
between the transparent conductor layer and the driver  
layer.
- 15 2. A button mechanism as defined in claim 1, wherein  
the conductor pattern comprises:  
a first set of conductor elements corresponding to a  
first symbol; and  
20 a second set of conductor elements corresponding to a  
second symbol;  
wherein the first and second symbols are  
coincidentally located.
- 25 3. A button mechanism as defined in claim 2, further  
comprising a third set of conductor elements which form  
segments common to both the first and second symbols.
4. A button mechanism as defined in claim 2, wherein  
30 the first and second symbols are not commonly oriented.
5. A button mechanism as defined in claim 1, wherein  
the switch means comprises a popple switch.

6. A button mechanism as defined by claim 5, further  
comprising a transparent actuating member disposed in  
correspondence with the popple switch, such that the  
5 display means is between the popple switch and the  
transparent actuating member.

7. A button mechanism as defined in claim 6, wherein  
the transparent actuating member has a convex outer  
10 surface.

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8. An adaptable keypad, comprising:  
a plurality of keys, each of the plurality of keys  
comprising:

5 a switch means for operating a button circuit in  
response to actuation of the button mechanism;

display means disposed in correspondence with  
the switch means and comprising:

10 a driver layer having a conductor pattern  
configured in the pattern of a symbol to be displayed on  
the button mechanism;

a transparent conductor layer; and  
an electrically active ink layer disposed  
between the transparent conductor layer and the driver  
layer.

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9. An adaptable keypad as defined in claim 8,  
wherein the conductor pattern of each key comprises:

a first set of conductor elements corresponding to a  
first symbol; and

20 a second set of conductor elements corresponding to a  
second symbol;

wherein the first and second symbols are  
coincidentally located.

25 10. An adaptable keypad as defined in claim 9, each  
key further comprising a third set of conductor elements  
which form segments common to both the first and second  
symbols.

30 11. An adaptable keypad as defined in claim 9,  
wherein the first and second symbols are not commonly  
oriented.

12. An adaptable keypad as defined in claim 9,  
wherein the first set of conductor elements for each of  
the plurality of keys forms a first symbol set, the second  
set of conductor elements for each of the plurality of  
5 keys forms a second symbol set, the first and second  
symbol sets are exclusively energized depending on a mode  
of operating the keypad.

13. An adaptable keypad as defined in claim 8,  
10 wherein each of the switch means comprises a popple  
switch.

14. An adaptable keypad as defined by claim 13,  
further comprising a plurality of transparent actuating  
15 members, each of the transparent actuating members  
disposed in correspondence with each of the popple  
switches, such that the display means is between the  
popple switches and the transparent actuating members.

20 15. An adaptable keypad as defined in claim 13,  
wherein each of the transparent actuating members has a  
convex outer surface.

16. A portable electronic device having an adaptable keypad, the portable electronic device operable in a plurality of modes, the portable electronic device comprising:

- 5       a keypad having a plurality of keys comprising:
- a switch means for operating a button circuit in response to actuation of the button mechanism;
- display means disposed in correspondence with the switch means and comprising:
- 10           a driver layer having a conductor pattern configured in the pattern of a symbol to be displayed on the button mechanism, the conductor pattern including a first set of conductor elements corresponding to a first symbol, and a second set of conductor elements
- 15       corresponding to a second symbol, and wherein the first and second symbols are coincidentally located;
- a transparent conductor layer; and
- an electrically active ink layer disposed between the transparent conductor layer and the driver
- 20       layer.